same sequence and have produced the same clinical picture. Clinical summary: woman, forty-seven years old; no previous illness of consequence; at the age of thirty-five the disease first made its appearance with symptoms of pain in the lower left extremity. Locomotion became difficult, spontaneous tremor in the muscles of the lower extremities, and Romberg symptom were present. Patellar reflex retained. Heaviness in movements of upper extremities, muscular sense normal. Immobile facies; speech slow and tremulous. Violent pains in lumbar region. Anesthesia for cold and heat, hyperesthesia to contact and pain in lower extremities. Visual acuity diminished. Pupils normal, nystagmus. Acuity of hearing lessened. Vomiting and nausea after eating. Towards the end of life, legs were immobile, owing to contractions of tendons. Death from pulmonary tuberculosis. Microscopic examination of the central nervous system showed the following: (1) Relative smallness of the cerebro-spinal axis. The cord is especially diminutive, as are the posterior and anterior nerve roots. Great increase of the small nerve fibers which enter into them; (2) partial atrophy of the large cells in the anterior horn. Atrophy and disappearance of the small cells at the base of the anterior horn. Atrophy of Clarke's column. Disappearance of great numbers of the reflex collaterals and of the network of the myelinated fibers of the grey matter of the cord; (3) partial degeneration of the posterior column, localized, firstly, in the column of Burdach, then spreading more and more internally in the dorsal region. In the cervical region it is limited exclusively to the posterior portion of the column of Goll. The disappearance at the level of the nucleus of Goll's column. Partial degeneration of the whole antero-lateral tract, especially marked in the dorsal region. Total degeneration of Gowers' tract. Absence of the direct cerebellar tract, indicated by lack of degeneration in the dorsal region with slight trace in the cervical region; (4) degeneration of the lateral tract of the bulb and atrophy of the corresponding nucleus. Degeneration of the restiform body in its central part, while the peripheral portion is normal. The authors, after a consideration of the subject from the points of view of anatomy, physiology, and pathology, and of classification, conclude as follows: There exists a group of family and hereditary affections in the evolution of which cerebellar symptoms play an important part. The anatomical substratum is to be found in a lesion situated sometimes in the cerebellum, and sometimes in the cerebellar tracts. These cases have in common a general smallness of the neuroaxis. Outside of some clinical and anatomical peculiarities due to the participation of other systems, they differ from each other either by the extent or by the location of the lesion, or by its nature. If, from the anatomical point of view, the most extreme types are not comparable, there are others which have many points of contact between them and which form an intermediary series. SCHWAB.

THE SPINAL CORD OF CHILDREN AND SYRINGOMYELIA. Julius Zappert (Wien. klin. Woch., p. 949, No. 41, 1901).

The object of this study, as stated by the author, is to ascertain whether it is possible, by the examination of large numbers of spinal cords in children, to discover findings which have any relation to the cavity formation in the spinal cords in adults. The concrete question which the author set before him to solve was the discovery of the presence of a hydromyelia in its relation to the peculiarity of the epithelium of the central canal as well as the glia overgrowth, and in addition to follow further Schultze's work on the spinal cord hem-

orrhages which take place during the act of labor. Two hundred spinal cords of embryos, infants and children in the first two years of life form the material upon which the study is based. The cords were stained chiefly by the Marchi method and by Nissl, Weigert, etc. The changes found could be divided into two classes: First, intrapartum spinal cord hemorrhages; second, anomalies of the central canal and its vicinity. The results of the study of this material are as follows: One case of intrapartum spinal cord hemorrhage, the location of which was charasteristic of the location of the lesions in syringomyelia. Quite frequently an enlargement of the central canal was found. In one cord from a child nineteen months old, in addition to the enlarged central canal, was a glia overgrowth. In the cord of an anacephalous monster, anomalies of the central canal, as well as other pathological cord appearances, could be demonstrated.

SCHWAB.

NEPHROLITHIASIS AND SPINAL CORD DISEASES. Schlesinger (Wiener klin. Rund. No. 41, p. 769, 1901).

Recently the relation of stone in the kidney and diseases of the spinal cord have attracted considerable attention. The hypothesis has been advanced that in some cases spinal cord affections cause the formation of a kidney stone. The statistics of Maschka in this respect are of interest: In 78 cases of nephrolithiasis, he found spinal cord lesions in three. These statistics of Maschka are based upon 15,000 autopsies. In three cases of syringomyelia, Schlesinger found kidney calculus. In two of these, the stones were phosphates, and in the third, urates. Two had cystitis and pyelitis, and the third was free from kidney complications. In another case of encephalomyelitis a kidney calculus was found. From a consideration of these cases, as well as from those found in literature, the author comes to the following conclusions: Kidney calculi are found relativelv frequently in traumatic spinal cord affections, and in syringomyelia, much less often in spinal cord tumors. Symptoms of nephrolithiasis follow those of the spinal cord lesions months and years afterwards. Kidney calculi, found in spinal cord affections, are mostly phosphates, much more rarely urates. Cysto-pyelitis can be absent in spite of the kidney stone and spinal cord affection, but is present most frequently in phosphatic stone. The spinal cord affection appears to act favorably upon the formation of a calculus, either directly or indirectly. Perhaps a certain predisposition, especially in the case of uratic calculi, is essential.

SCHWAB.

THE PATHOLOGY AND TREATMENT OF RHEUMATOID ARTHRITIS. P. W. Latham (The Lancet, Vol. clx., 1901, p. 998).

The aim of this interesting contribution is to uphold the dystropic or neural theory of rheumatoid arthritis. The author feels that although it is said to be without the support of definite evidence of morbid change in the spinal nerve cells or in the nerves of the joint, he believes this criticism to be based on insufficient pathological observation and feels that both clinically and therapeutically he has found cordial support for the dystrophic hypothesis. As regards the clinical side of his argument he points to the distinctly neurotic character of the antecedents and accompaniments of the arthritic trouble. Neuralgias, often mistaken for rheumatism, of the legs, along the spine or across the loins, are frequent forerunners of arthritis rheumatica. Centrally, worry, anxiety, shock—seem to him in some cases to have originated the disease. The most prominent accompaniment of the arthritic mischief is seen in the muscular atro-